Amendments to the Specification:

Please replace the section beginning at page 6, line 8, with the following redlined section:

The above objects of the present invention can be accomplished by a method for determining a power of a laser beam which is adapted for determining a recording power of the laser beam to be projected onto a data rewritable type optical recording medium for recording data therein, the method for determining a power of a laser beam comprising steps of recording a first test signal in the data rewritable type optical recording medium while varying a level of the recording power of the laser beam, measuring, for each of the levels of the recording power of the laser beam, an amplitude A0 of a reproduced signal obtained by reproducing the first test signal before the first test signal is influenced by cross erasing of data, an amplitude A1 and jitter J1 of a reproduced signal obtained by reproducing the first test signal after the first test signal was once influenced by cross erasing of data and an amplitude ~~As~~ A10 and jitter ~~Js~~ J10 of a reproduced signal obtained by reproducing the first test signal after an influence of cross erasing of data on the first test signal was saturated, calculating a first parameter for each of the levels of the recording power as a function of a difference between the amplitude A0 of the reproduced signal obtained reproducing the first test signal before the first test signal is influenced by cross erasing of data and the amplitude A1 of the reproduced signal obtained by reproducing the first test signal after the first test signal was once influenced by cross erasing of data, calculating a second parameter for each of the levels of the recording power as a function of a difference between the amplitude A1 of the reproduced signal obtained by reproducing the first test signal after the first test signal was once influenced by cross erasing of data and the amplitude ~~As~~ A10 of the reproduced signal obtained by reproducing the first test signal after the influence of cross erasing of data on the first test signal was saturated, calculating a third parameter as a function of a difference between jitter ~~Js~~ J10 of the reproduced signal obtained by reproducing the first test signal after the influence of cross erasing of data on the first test signal was saturated and jitter J1 of the reproduced signal obtained by reproducing the first test signal after the first test signal was once influenced by cross erasing of data, obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, thereby

determining a critical parameter, recording a second test signal in the data rewritable type optical recording medium while varying a level of the recording power of the laser beam, judging whether or not signal characteristics of a reproduced signal obtained by reproducing the second test signal recorded in the data rewritable type optical recording medium satisfy reference conditions, measuring, for each of the levels of the recording power of the laser beam, when the signal characteristics of the reproduced signal obtained by reproducing the second test signal recorded in the data rewritable type optical recording medium satisfy the reference conditions, an amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the second test signal before the second test signal is influenced by cross erasing of data and an amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the second test signal after the first test signal was once influenced by cross erasing of data, calculating a fourth parameter based on the amplitudes ~~AA0~~ D3 and ~~AA1~~ D2 of the reproduced signals obtained by reproducing the second test signals as a function of a difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the second test signal before the second test signal is influenced by cross erasing of data and the amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the second test signal after the first test signal was once influenced by cross erasing of data, comparing the critical parameter and the fourth parameter, and determining the recording power of the laser beam at which the fourth parameter was obtained as an optimum recording power when the fourth parameter is equal to or lower than the critical parameter.

According to the present invention, it is possible to determine an optimum recording power of the laser beam so that jitter of a reproduced signal obtained by reproducing data recorded in a data rewritable type optical recording medium can be controlled within a tolerance even when cross erasing of data occurs and that the reproduced signal having the highest level can be obtained only by when the signal characteristics of the reproduced signal obtained by recording the second test signal in the data rewritable type optical recording medium while varying a level of the recording power of the laser beam and reproducing the second test signal recorded in the data rewritable type optical recording medium satisfy the reference conditions, measuring, for each of the levels of the recording power of the laser beam, an amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the second test signal

before the second test signal is influenced by cross erasing of data and an amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the second test signal after the first test signal was once influenced by cross erasing of data, calculating a fourth parameter based on the amplitudes ~~AA0~~ D3 and ~~AA1~~ D2 of the reproduced signals obtained by reproducing the test signal as a function of the difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the second test signal before the second test signal is influenced by cross erasing of data and the amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the second test signal after the first test signal was once influenced by cross erasing of data, and comparing the thus calculated fourth parameter with a critical parameter determined in advance.

In a preferred aspect of the present invention, the method for determining a power of a laser beam comprises steps of setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, ~~and~~ a second track, and a third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording the second test signal thereon, reproducing the second test signal recorded on the ~~first~~ second track, judging whether or not signal characteristics of the thus obtained reproduced signal satisfy reference conditions, changing the level of the recording power of the laser beam and recording the second test signal onto the ~~first~~ second track and the ~~second~~ third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order when the signal characteristics of the reproduced signal do not satisfy the reference conditions, until signal characteristics of a reproduced signal obtained by reproducing the second test signal recorded on the ~~first~~ second track satisfy the reference conditions, reproducing the second test signal recorded on the ~~first~~ second track and measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude ~~AA1~~ D2, reproducing the second test signal recorded on the ~~second~~ third track and measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude ~~AA0~~ D3, and determining the fourth parameter as a function of a difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained from the ~~second~~ third track and the amplitude ~~AA1~~ D2 of the reproduced signal obtained from the ~~first~~ second track.

In a preferred aspect of the present invention, the method for determining a power of a laser beam comprises steps of setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a third track, a fourth track and a fifth track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording the first test signal thereon, reproducing the first test signal recorded on the fourth track, measuring an amplitude and jitter of the thus obtained reproduced signal, thereby obtaining the amplitude A1 and the jitter J1, reproducing the first test signal recorded on the fifth track, measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude A0, calculating the first parameter, directly overwriting the first test signal recorded on the third track and the first test signal recorded on the fifth track with the first test signal until an influence of cross erasing of data on the first test signal recorded on the fourth track has become saturated, reproducing the first test signal recorded on the fourth track, measuring an amplitude and jitter of the thus obtained reproduced signal, thereby obtaining the amplitude ~~As~~ A10 and the jitter ~~Js~~ J10, calculating the second parameter and the third parameter, repeatedly performing the above identified steps while varying a level of the recording power of the laser beam by α within a predetermined range, and calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam.

The above and other objects of the present invention can be also accomplished by a method for determining a critical parameter used for determining a recording power of a laser beam to be projected onto a data rewritable type optical recording medium for recording data therein, the method for determining a critical parameter used for determining the recording power of the laser beam comprising steps of setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring an amplitude A1 and jitter J1 of the thus obtained reproduced signal, reproducing the first test signal recorded on the third track, measuring an amplitude A1 of the thus obtained reproduced signal, calculating a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the third track

and the amplitude A1 of the reproduced signal obtained from the second track, directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal until an influence of cross erasing of data on the first test signal recorded on the second track has become saturated, reproducing the first test signal recorded on the second track, measuring an amplitude ~~As~~ A10 and jitter ~~Js~~ J10 of the thus obtained reproduced signal, calculating a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude A10 of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ J10 of the reproduced signal and the jitter J1 of the reproduced signal, repeatedly performing the above identified steps while varying a level of the recording power of the laser beam by α within a predetermined range, calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam, obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, and determining the thus obtained value of the first parameter as a critical parameter.

The above and other objects of the present invention can be also accomplished by a data rewritable type optical recording medium recorded with a critical parameter used for determining a recording power of a laser beam, the critical parameter being determined by setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track formed thereon to be adjacent with each other in this order, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring an amplitude A1 and jitter J1 of the thus obtained reproduced signal, reproducing the first test signal recorded on the third track, measuring an amplitude A1 of the thus obtained reproduced signal, calculating a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the third track and the amplitude A1 of the reproduced signal obtained from the second track, directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal until an influence of cross erasing of data on the first test signal recorded on the second track has become saturated, reproducing the first test

signal recorded on the second track, measuring an amplitude ~~As~~ A10 and jitter ~~Js~~ J10 of the thus obtained reproduced signal, calculating a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude A10 of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ J10 of the reproduced signal and the jitter J1 of the reproduced signal, repeatedly performing the above identified steps while varying a level of the recording power of the laser beam by α within a predetermined range, calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam, and obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance.

The above and other objects of the present invention can be also accomplished by a data recording apparatus storing a critical parameter used for determining a recording power of a laser beam so as to be associated with ID data for identifying a kind of an optical recording medium, the critical parameter being determined by setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring an amplitude A1 and jitter J1 of the thus obtained reproduced signal, reproducing the first test signal recorded on the third track, measuring an amplitude A1 of the thus obtained reproduced signal, calculating a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the third track and the amplitude A1 of the reproduced signal obtained from the second track, directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal until an influence of cross erasing of data on the first test signal recorded on the second track has become saturated, reproducing the first test signal recorded on the second track, measuring an amplitude ~~As~~ A10 and jitter ~~Js~~ J10 of the thus obtained reproduced signal, calculating a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude A10 of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ J10 of the

reproduced signal and the jitter J1 of the reproduced signal, repeatedly performing the above identified steps while varying a level of the recording power of the laser beam by α within a predetermined range, calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam, and obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance.

The above and other objects of the present invention can be also accomplished by a data recording apparatus storing an optimum recording power of a laser beam so as to be associated with ID data for identifying a kind of an optical recording medium, the optimum recording power of the laser beam being determined by setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring an amplitude A1 and jitter J1 of the thus obtained reproduced signal, reproducing the first test signal recorded on the third track, measuring an amplitude A1 of the thus obtained reproduced signal, calculating a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the third track and the amplitude A1 of the reproduced signal obtained from the second track, directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal until an influence of cross erasing of data on the first test signal recorded on the second track has become saturated, reproducing the first test signal recorded on the second track, measuring an amplitude ~~As~~ A10 and jitter ~~Js~~ J10 of the thus obtained reproduced signal, calculating a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude A10 of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ J10 of the reproduced signal and the jitter J1 of the reproduced signal, repeatedly performing the above identified steps while varying a level of the recording power of the laser beam by α within a predetermined range, calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam, obtaining a value of

the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, thereby determining a critical parameter used for determining the recording power of the laser beam, setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a fourth track, ~~and~~ a fifth track, and a sixth track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a second test signal thereon, reproducing the second test signal recorded on the ~~fourth~~ fifth track, judging whether or not signal characteristics of the thus obtained reproduced signal satisfy reference conditions, changing the level of the recording power of the laser beam and projecting the laser beam onto the ~~fourth~~ fifth track and the ~~fifth~~ sixth track formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording the second test signal thereon and reproducing the second test signal recorded on the ~~fourth~~ fifth track when the signal characteristics of the reproduced signal do not satisfy the reference conditions, until the signal characteristics of the thus obtained reproduced signal has satisfied the reference conditions, reproducing the second test signal recorded on the ~~fourth~~ fifth track to measure an amplitude ~~AA1~~ D2 of the thus obtained reproduced signal, reproducing the second test signal recorded on the ~~fifth~~ sixth track to measure an amplitude ~~AA0~~ D3 of the thus obtained reproduced signal, calculating a fourth parameter as a function of a difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained from the ~~fifth~~ sixth track and the amplitude ~~AA1~~ D2 of the reproduced signal obtained from the ~~fourth~~ fifth track, comparing the critical parameter and the thus calculated fourth parameter, and obtaining a recording power at which the fourth parameter was obtained when the fourth parameter is equal to or lower than the critical parameter.

The above and other objects and features of the present invention will become apparent from the following description made with reference to the accompanying drawings.

Please add, beginning at page 21, between lines 6 and 7, the following new paragraph (or section):

Figure 9 is a schematic plan view showing three sets of tracks consisting of three adjacent tracks in a power calibration area of an optical recording medium in which a test signal is received.

Please replace the section beginning at page 26, line 8, with the following redlined section:

Figure 4 is a schematic plan view showing ~~the~~ three tracks adjacent with each other in the calibration area of the optical recording medium 10 in which ~~the~~ a test signal ~~was~~ is recorded ~~at Step S1~~.

In Figure 4 and 9A, a first track is a track in which the test signal was first recorded, the second track is a track in which the test signal was secondly recorded and the third track is a track in which the test signal was last recorded.

Please replace the paragraph beginning at page 30, line 16, with the following redlined paragraph:

Here, similarly to in Figure 4 and Figure 9A, as shown in Figure 9B, a ~~first~~ fourth track is a track in which the test signal was first recorded, the ~~second~~ fifth track is a track in which the test signal was secondly recorded and the ~~third~~ sixth track is a track in which the test signal was last recorded. The fourth track, the fifth track, and the sixth track can be any three adjacent tracks referred to above. For convenience, the fourth track, the fifth track, and the sixth track will be referred to as the first track, the second track, and the third track, respectively, for this particular Figure 9B.

Please replace the paragraph beginning at page 32, line 18, with the following redlined paragraph:

Thus, when it is judged that the level of the recording power *Pw* of the laser beam exceeds the maximum level *Pw(max)* determined in advance (Step S32), the measurement of the

jitter J0, J1 and J10 and the amplitudes A0, A1 and A10 of the reproduced signals obtained by reproducing the test signals recorded on the second track and the third track for each of the levels of the recording power *Pw* of the laser beam is completed.

Please replace the paragraph beginning at page 33, line 3, with the following redlined paragraph:

Here, the first signal amplitude reduction ratio R1 is defined as (A0 – A1) / A0, the amplitude A0 corresponds to an amplitude D3 of a reproduced signal obtained by reproducing the test signal recorded on the third track at Step S7 of the laser beam recording power determination routine shown in Figure 3 and the amplitude A1 corresponds to an amplitude ~~D3~~ D2 of a reproduced signal obtained by reproducing the test signal recorded on the ~~third~~ second track at Step S7 of the laser beam recording power determination routine shown in Figure 3.